

Abstract of the Disclosure

To determine an optimum addition ratio of ethyl alcohol in the etching
5 gas in a plasma etching unit, an ethyl alcohol addition ratio at which the
isotropic etching rate of the etching mask is obtained, and on the basis of the
obtained ethyl alcohol addition ratio, the optimum addition ratio is determined,
by performing an etching process using an etching gas containing ethyl alcohol
in the optimum addition ratio, the portions of the bottom antireflective coating
10 which are not covered with the etching mask are removed. Thus, it is possible
to provide a novel etching method capable of appropriately removing
unnecessary portions of the bottom antireflective coating which are not covered
by photoresist without causing much damage to the photoresist used as the
etching mask.

15